REMARKS

I. Status of the Application

Claims 18 and 20-37 are pending in this application. In the November 24, 2009 office action, the Examiner:

A. Rejected claims 18, 23-28, 30, 31, 35 and 36 as being unpatentable over US Pub 2003/0033430 to Lau et al. ("Lau") in view of US 5,477,547 to Sugiyama et al. ("Sugiyama");

B. Rejected claims 20, 32 and 37 as being unpatentable over Lau in view of Sugiyama in further view of US 6,883,079 to Priborsky et al.;

C. Rejected claims 21 and 33 being unpatentable over Lau in view of Sugiyama and in view of US 6,026,198 to Okada et al.;

D. Rejected claim 29 as being unpatentable over Lau in view of Sugiyama in further view of US 6,094,431 to Yamato et al.; and

E. Rejected claims 22 and 35 as being unpatentable over Lau in view of Sugiyama and in view of US Pub 2003/0222996 to Patej et al.

In this response, Applicants have amended claims 18, 30 and 36. Reconsideration based on the foregoing amendments and following remarks is respectfully requested.

II. Independent Claims 18, 30, and 36

Independent claims 18, 30, and 36 were each rejected as being obvious over Lau in view of Sugiyama. In this response, claims 18, 30, and 36 have each been amended to recite

that "each entry of the routing table comprises a compressed forwarding address and an output link number, and that, if a positive comparison between the compressed destination address identifier and a compressed forwarding address in an entry stored in the routing table is found, the data packet is switched to an output link associated with the output link number in the entry." Support for this amendment may be found, for example, in FIG. 2 and on page 13, lines 10-14 of the specification as originally filed. As explained below, the combination of Lau and Sugiyama, as proposed by the Examiner, does not arrive at the inventions of claims 18, 30, and 36, as amended.

In the Office Action, Lau was cited as disclosing all of the limitations of each of claims 18, 30, and 36 except for explicitly teaching switching the data packet to an output link associated with the forwarding address corresponding to the entry for which Sugiyama was cited. In particular, it was acknowledged that Lau does not show switching a data packet to an output link associated with the forwarding address corresponding to the entry for which there was a positive comparison between the compressed destination address identifier and the compressed forwarding address stored in the routing table.

It was argued that a respective modification of the teachings of Lau was obvious in view of Sugiyama. In this respect, reference is made to col. 2, lines 10-13, and 52-60 of Sugiyama, according to which a table memory address generating means is provided in each LAN for compressing the transmit-source address in the packet and for generating a table memory address, and that a FIFO memory earlier allows the delivery of the packet at an output and the switching network performs such control as to connect the output of the FIFO memory to a port of the LAN at the transmit-destination site. It is argued that it would have

been obvious to one of ordinary skill in the art to modify the teachings of Lau by switching the data packet to an output link associated with the forwarding address corresponding to the entry in order to compress the transmit source address in the packet and for generating a table memory address.

However, in view of the amendments to independent claims 18, 30, and 36, neither Lau nor Sugiyama, neither alone nor in combination, show a routing process in which entries of a routing table each comprise a compressed forwarding address and an output link number and a packet for which a correspondence between the compressed destination address of the packet and the compressed forwarding address in an entry of the routing table is found, is switched to an output link associated with the output link number in this entry.

In fact, the teachings of Lau are not concerned with routing at all. Rather, the teachings of Lau refer to the field of identifying an IP flow. According to Lau, this is accomplished by flow monitors (in Fig. 1 designated by reference numerals 150 and 160). As shown by Figs. 2 and 3 of Lau, each of the flow monitors includes a source/destination address table (Figs. 2 and 3, reference numerals 270 and 370). These tables may include either source or destination address information associated with data packets identified by a flow identifier program of the flow monitors (see paragraphs [0027] and [0033]).

However, the source/destination address tables as described by Lau are not suitable to be used as routing tables. In fact, these tables do not include any information, such as an output link number, which can be used in a routing process. Moreover, the flow monitors as described by Lau have an entirely different purpose than routing of data packets. As for example described in paragraph [0022] of Lau, the flow monitors have the purpose of

identifying a flow of data packets between two measuring points in a network and determine the direction of the flow of data between these two measuring points. Accordingly, the flow monitors are not involved in controlling the transmission of data packets, in particular in the process of routing data packets, but are used as monitoring devices which do not interfere with the way in which packets are propagated in the network. Therefore, Lau cannot give any indications with respect to controlling the switching of data packets to output links.

Furthermore, there is no reason for the skilled person to modify the teachings of Lau by including an output link number into entries of the source/destination address table or by controlling the switching of a data packet on the basis of a comparison between a compressed destination address and a compressed forwarding address. This becomes immediately clear when considering the structure of the flow monitors as illustrated by Figs. 2 and 3 of Lau. As can be seen, the flow monitors each have a single network interface (reference numerals 230, 330), which is used to receive data packet information from the network (see paragraph [0030], and a single input/output interface (reference numerals 240, 340), which is used for out-of-band communication between a pair of flow monitors so as to communicate destination addresses (see paragraphs [0031], [0035], and [0036]). Accordingly, none of these interfaces has the purpose of transmitting data packets. Therefore, there is absolutely no reason to implement the flow monitors of Lau with functionalities for switching data packets to output links, even when considering the teachings of Sugiyama with respect to controlling forwarding operations of data packets as mentioned in the Office Action.

In addition, regarding the rationale for modifying Lau with Sugiyama as proposed in the Office Action, it remains unclear how switching of the data packet to an output link can be

used for the purpose of compressing the transmit-source address in the packet and for generating a table memory address, in particular since according to Lau the compression of the transmit-source address and generation of the table memory address is accomplished by the table memory address generating means, whereas controlling the forwarding of data packets is accomplished by a totally different entity, referred to as forward means (see col. 2, lines 38-51).

For the sake of completeness, the other documents cited in the Office Action fail to provide any further indications with respect to amended subject-matter of independent claims 18, 30 and 36. In particular, Okada, Priborsky and Patej each refer to specific details of data compression techniques, without providing any further indications to properties of routing table entries or controlling of the switching of data packets to output links as defined in the claims. Similarly, Yamato refers to network resource reservation techniques, without discussing any details of routing table entries or switching of data packets to output links.

Based on the above, it is respectfully submitted that the proposed combination of Lau and Sugiyama does not arrive at the limitations of claims 18, 30, and 36, as amended, that state that "each entry of the routing table comprises a compressed forwarding address and an output link number, and that, if a positive comparison between the compressed destination address identifier and a compressed forwarding address in an entry stored in the routing table is found, the data packet is switched to an output link associated with the output link number in the entry." Therefore, it is respectfully submitted that the obviousness rejection of claims 18, 30, and 36, as amended, over Lau and Sugiyama should be withdrawn.

III. The Rejection of Dependent Claims 20-29, 31-35 and 37 Should be Withdrawn

In the March 12, 2008 Final Office Action, the examiner rejected each of dependent claims 20-29, 31-35 and 37 under 35 U.S.C. § 103(a). Dependent claims 20-29, 31-35 and 37 all depend from and incorporate all the limitations of one of independent claims 18, 30 or 36. Moreover, each of these dependent claims includes additional novel and non-obvious limitations. Accordingly, it is respectfully submitted that dependent claims 20-29, 31-35 and 37 are also allowable for at least the same reasons that independent claims 18, 30 and 36 are allowable, as well as additional reasons. Therefore, the examiner's rejection of claims 20-29, 31-35 and 37 should be withdrawn.

IV. Conclusion

For all of the foregoing reasons, it is respectfully submitted the applicant has made a patentable contribution to the art. Favorable reconsideration and allowance of this application is therefore respectfully requested.

In the event applicant has inadvertently overlooked the need for an extension of time or payment of an additional fee, the applicant conditionally petitions therefore, and authorizes any fee deficiency to be charged to deposit account 13-0014.

Respectfully submitted,

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